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The Origins of Social Capital

Evidence From a Survey of Post-Soviet Central Asia

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This article investigates the determinants of social capital by analyzing an original survey of post-Soviet Central Asia. It tests hypotheses derived from two related questions: whether networks, norms, and trust are empirically related and the extent to which four factors—culture, regime type, perceptions of government responsiveness, and development interventions—predict levels of social capital. The results show that trust and norms diverge from networking. Interaction is higher under less repressive regimes and is further increased by development interventions; trust and norms are higher under conditions of greater repression. Culture does not affect any indicators of social capital, but perceptions of responsiveness correlate with higher levels of trust. As such, disaggregating social capital is a promising new direction for research. Scholars should investigate why the components of social capital sometimes correlate but at other times diverge, and they should consider the possibility of distinct causal mechanisms in their development.

Keywords: *social capital; Central Asia; trust; norms; networks; international development*

Social capital (SC) is seen by economists, development experts, scholars of democratization, and specialists of postconflict reconstruction alike as a panacea for many fundamental problems that affect modern societies. They widely argue that societies endowed with high levels of SC stand a

better chance of becoming democratic, prosperous, and stable than do societies lacking these endowments (Badescu & Uslaner, 2003). SC is especially important for low- and middle-income transition countries, given that such countries face the triple challenge of democratization, economic development, and avoidance of violent conflict (Kuzio, 2001). According to most definitions, SC is based on norms of reciprocity and interpersonal trust; it enables the formation of autonomous organizations, often through social networks; and it increases the capacity of individuals linked by these networks to act collectively. To quote Putnam's famous formulation (1993), SC refers to "features of social organization, such as networks, norms and trust that facilitate coordination and cooperation for mutual benefit" (pp. 35–36; Woolcock & Narayan, 2001). SC is thought to have a beneficial effect on an aggregated societal level because it increases the capacity of individuals, groups, and organizations to reach out and form mutually beneficial relationships with one another (Fukuyama, 1995).

Furthermore, scholars generally agree that SC is put to best use when the state governs in a way that complements the activities of informal social groups, as opposed to a way that is adversarial (Narayan, 1999; Woolcock & Narayan, 2001). Putnam's work (1993) on Italy demonstrated how SC, as accumulated in horizontal civic associations, helped to increase the performance of regional governments. As such, positive feedback loops of high trust and cooperation in society strengthened the state in its ability to provide public goods.

Given the wide agreement on the beneficial effects of SC, it comes as no surprise that many scholars are intrigued by the question of how SC emerges. It is well established that high levels of SC correlate with democracy and economic growth; however, it is hotly disputed whether high levels of SC are a cause or, rather, an effect (Edwards & Foley, 1998; Jackman & Miller, 1998; Krishna, 2003). Our key question is therefore, what are the origins of SC? For some scholars, SC reflects enduring cultural values that have evolved over centuries (Fukuyama, 1995; Inglehart, 1997; Putnam, 1993). These norms then serve as the key exogenous factors in generating economic and governmental performance. Such approaches essentially

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treat SC as a cultural phenomenon. Analysts adhering to this approach regard SC as a set of independent variables. The causal link runs from culturally evolved high levels of SC to better governance and better economic performance.

Other scholars maintain that levels of SC can be altered through induced structural change (Knack & Keefer, 1995; Schneider, Teske, Marschall, Mintrom, & Roch, 1997). Such a view is closer to the thinking of original SC theorists, such as Granovetter (1983) and Coleman (1988), who placed SC in a rational choice framework. In their accounts, institutional context accounts for the level of SC; hence, SC is treated as an endogenous entity. If this holds true, then at the macro-level, the institutional framework of a democratic regime would increase the level of SC, whereas that of more authoritarian regimes would reduce it. Similarly, we would expect communities that possess institutions for representation, participation, and decision making to have levels of SC higher than those of communities that lack these endowments.

Especially for countries in development or transition, the question of whether SC is endogenous or exogenous is by no means an arcane academic question. One of the key strategies of international development relies on the assumption that the level of SC is subject to policy intervention and can so be increased by inducing the right changes to the institutional framework (Henderson, 2002). With regard to low-income transition countries, there has been a recent shift in the strategy of many leading development agencies toward so-called community-driven development (Kay, 2005; Peabody, Kuehnast, & Rana, 2003; Wassenich & Whiteside, 2004; World Bank, 2000, 2002). This approach assumes that community-driven development works best when the level of SC available to the communities is high; consequently, community-driven development programs aim to increase SC in their target communities. Increased levels of SC will then, ideally, lead to better governance, more democracy, and economic growth.

This article therefore seeks to accomplish two tasks: first, to disaggregate the concept of SC into three underlying components and so investigate their relationship; second, to explore whether cultural factors or institutional settings are better predictors of levels of SC. Standard definitions of SC consist of three related concepts—trust, norms, and interaction (or networking)—and the common assumption that these concepts are correlated. However, few empirical studies disaggregate the concept into its three components and then measure them separately. For example, an overview of 13 empirical studies on SC reveals that none of them attempt to measure all three components (Krishna, 2002, pp. 57-62). Seven studies use only a

network-based measurement; four studies, a measurement based on networks and norms; and two studies, a measurement based only on norms.

This is not a problem as long as trust, norms, and networking are related concepts that capture the same underlying reality and so positively correlate, as is empirically the case for developed and democratic Western societies (Raiser, Haerpfer, Nowotny, & Wallace, 2001). In member states of the Organization of Economic and Cultural Development, effective political institutions, high interpersonal trust, and norms that facilitate cooperation are bundled in a self-reinforcing loop that has emerged over decades or even centuries.

However, this is not necessarily the case in transition countries, such as those in the former Soviet Union. Because the Soviet state crowded out civil society and recruited ordinary citizens to spy on their neighbors, SC emerged in dense personal networks used to secure resources to survive the shortage economy (Howard, 2003; Ledeneva, 1998). After the Soviet collapse, new institutions in the successor states partially inherited Soviet structures and norms, thereby shaping the development of SC. Yet, the ways in which trust, norms, and networks have grown together or drifted apart remain unclear.

Evidence from our community-level fieldwork in Tajikistan, Kyrgyzstan, and Uzbekistan has led us to question the assumption that norms, trust, and networking always correlate. For example, in many village communities that we visited, people exhibited high levels of interpersonal trust. They also expressed agreement with social norms that urge individuals and households to engage in collective action. At the same time, however, people in some (but not all) villages were socially isolated by their reliance on intimate informal networks and did not interact frequently with other villages. This led us to wonder whether trust, norms, and networking are separate phenomena and whether all are similarly affected by the level of state control over society.

We should point out that political context is only one possible influence on the strength of SC. In fact, studies have found wide variation between countries of the same regime type, as well as regional variation within polities. For example, Miguel (2004) finds higher levels of cooperation and local public goods provision in Tanzania than in Kenya owing to the former's nation-building policies, despite the fact that the two countries exhibit similar indicators for democratization.¹ Varshney (2002) argues that interethnic trust and cooperation developed in some parts of India but not others, depending on historical legacies of civic engagement. Even within the United States, studies have found variation in SC as a result of factors such as ideological polarization, income inequality, ethnic diversity, and levels of education (Iyer, Kitson, & Toh, 2005; Rahn & Rudolph, 2005).

Although we do not test all possible influences on SC, we do include a variety of control variables to account for differences within countries.

Why Central Asia?

We base our investigation on data from two countries in Central Asia—Uzbekistan and Kyrgyzstan—for three reasons. First, there is a need to fill in a gap in the literature on SC with regard to low-income and transitional countries. The concept of SC was originally developed to explain outcomes in wealthy Western countries and later tested in settings with different historical trajectories, such as East Asia and Eastern Europe (Aberg, 2000; Carpenter, Danieri, & Takahashi, 2004; Helliwell, 1996; Rose, 1998). But it has yet to travel further east, especially into regions less often visited by Western scholars and rarely incorporated into comparative theory.² Theoretically, these two countries are thought to face the double burden of (a) the Soviet-era atomization of civil society and (b) inward-looking and exclusive “clan-based” political systems. Our survey was designed to illuminate whether societies with such debilitating legacies can accumulate SC, even in the face of poverty and low levels of democracy.³

From a practical standpoint, Uzbekistan’s and Kyrgyzstan’s transition from a Soviet past, toward an uncertain future, provides a case study on whether outside intervention can help in creating stable democratic institutions and economic growth. After September 11, 2001, when the Central Asian region gained new strategic importance, both countries became the beneficiaries of substantial development aid that, in theory, would strengthen civil society and empower people to shape their countries’ futures. In the context of a political transition supported by substantial external financial and technical assistance, the question of how SC develops in such a context goes beyond purely academic interest and is of immense practical value.

A third reason is methodological: these two countries represent most-similar cases that differ on a small number of potential explanatory variables. In addition to their preexisting geographical, linguistic, and cultural similarities, 150 years of Russian and Soviet rule helped to level socioeconomic and political differences that existed at the time of incorporation into the Russian Empire (Jones Luong, 2002). Today, the countries rank similarly on such indicators as income level and development;⁴ yet, the two countries differ with regard to regime type and ethnic makeup. Kyrgyzstan is consistently rated more democratic than Uzbekistan, as a result of liberal reforms made in the first half of the 1990s.⁵ By contrast, Uzbekistan has maintained significant political continuity from the Soviet Union. Freedom

House gives it the lowest possible score on civil and political liberties, and *Parade Magazine* (2006) has ranked its president, Islam Karimov, among the 10 worst dictators for 2 straight years. The heavy hand of the state is felt even on the local level, where the regime has adapted neighborhood associations into an apparatus to monitor and control the population (Sievers, 2002).

The ethnic distributions of the two countries allow us to test hypotheses on the cultural determinants of SC. Whereas Uzbekistan is nearly homogeneous, Kyrgyzstan has a sizable minority of unassimilated ethnic Uzbeks and (mainly urban) Slavs, which provides the opportunity for a natural experiment. Using data on the ethnicity of respondents, we can test whether differences between the countries are due to political environment or to characteristics that reside within the ethnic group.

Measuring SC

There is no generally agreed measure of SC or its components because, as Krishna (2003) convincingly argues, “networks, roles, rules, procedures, precedents, norms, values, attitudes and beliefs are different among people who have different patterns of life. Measures of social capital that are relevant for one set of cultures can be irrelevant for others” (p. 7). Furthermore, SC is not directly observable. We can measure only its manifestations or behavioral consequences.

To ensure the validity of our survey instrument, we devised proxy measures for trust, norms, and networking that are locally appropriate and that pick up social practices rather than attitudes.⁶ Such an approach is especially important in authoritarian countries, where respondents are prone to mislead investigators in their attitudes toward political authorities. Also, vague concepts such as general trust in people (Inglehart, 1997) and attitudes toward democracy (Rose, 2002) are too abstract to be relevant to most respondents and are less likely to reveal information about our primary concern—behavior. Therefore, where possible, we designed our survey questions to be specific and locally relevant but to also represent valid operationalizations of general concepts.

Norms

The first component of SC is the existence of social norms that facilitate cooperation. Norms that favor voluntary contributions and short-term sacrifices to a collective can generate long-term payoffs. When people internalize notions of acceptable social behavior and encourage others to

observe the same principles, these rules become self-enforcing over time, thereby allowing a group to overcome prisoner's dilemmas and so engage in collective action (Elster, 1989; Ostrom, 1990). By contrast, the absence of cooperative norms, as typified by Banfield (1958) and Putnam's research (1993) on southern Italy, may stem from (and also cause) widespread suspicion and alienation, which leads to noncompliance, self-centered behavior, short time horizons, and collectively dismal outcomes.

To capture this concept, we conceptualize norm adherence as resting on three principles: contributions to the group, the acceptance of sanctions, and voluntary policing of noncooperation. To this end, we created an additive index of the following three survey questions, the responses to which ranged from *strongly agree* to *strongly disagree*: "Every member should contribute his or her free time and money to common projects and events in his community," "If a family does not act according to the accepted behavior of our community, their behavior should be corrected," and "It is the responsibility of members of the community to correct the behavior of people in the community whose behavior is not appropriate."⁷ The resulting composite variable ranges along a scale from 3 (weak community norms) to 12 (strong community norms).

Trust

Second, we created a proxy measure for trust based how much respondents trust various groups of people. The most commonly asked question used to measure interpersonal generalized trust is of little help (i.e., "Do you trust people in general?") because it may elide important distinctions that people make on the basis of ascriptive or other categories. To capture actual social practices, we asked respondents how much they trust individuals who belong to various relational categories, from the most proximate to the most distant: neighbors, members of the kin group (*urug*), colleagues/coworkers, classmates, people from the same block or village, people from the same district or town, and members of the same nationality.⁸ The value of the index varied on a scale from 7 (minimum trust of all the above) to 28 (maximum trust).

Networking

Finally, the sine qua non of SC is social interaction. One way to ascertain social interaction is to inquire about people's memberships in different civic associations (Narayan & Pritchett, 1999; Portney & Berry, 1997;

Putnam, 1993). This approach may work well in countries with developed civil societies and numerous formal associations, but in non-Western and rural societies, it misses important interaction that takes place in informal settings. To capture socially relevant interaction in developing countries with weak civil society, we conceive of interaction more broadly, as instances of social exchange in informal settings where people are most likely to develop meaningful relationships.⁹

However, the measure should not be so broad as to include mundane interaction within one's primary group (e.g., in the street in one's own village), given that those relationships are unlikely to produce significant social benefits, such as new sources of information or financial assistance. We therefore drew our proxy for networking from questions regarding how often respondents socialize with other people beyond the community in various settings: in private homes, at restaurants/teahouses, at sporting/recreational activities, and at community markets (bazaars).¹⁰ The resulting composite variable ranges in value from 4 (infrequent interaction) to 16 (regular interaction).

Data Collection

Our data come from an original survey of 2,000 respondents in Uzbekistan and Kyrgyzstan (1,000 respondents from each country), conducted in July and August 2005. It was administered in local languages (Russian, Uzbek, and Kyrgyz) by the local staff of a research firm. Supervisors hand-checked the completed questionnaires, and approximately 17% of households were visited following completion of the survey for verification purposes. Interviews lasted 45 to 60 min on average. See appendix for more details on survey methodology.

Hypotheses

We specified and tested five hypotheses based on the theoretical literature.

Hypothesis 1: Trust, norms, and networking covary with one another.

Specifically, are trust, norms, and networking components of the same concept? As reported above, it is taken as a given, both theoretically and empirically, that "all good things go together." Yet, under different economic or social conditions, the three may develop in separate ways. This is an empirical proposition, and it is testable.

Hypothesis 2: A more democratic regime facilitates greater networking, stronger norms, and higher levels of trust.

According to some scholars, SC can emerge only in an environment where people feel secure enough to interact broadly and trust their fellow citizens. As the bulk of the literature on SC in the postcommunist world argues, Leninism left major (detrimental) legacies for the subsequent development of society and democracy (Howard, 2003; Rose, 1998). By contrast, a more open and pluralistic regime should lay the foundation for higher levels of SC.

Hypothesis 3: Ethnicity is a strong predictor of the level of SC.

An alternative view is that SC must be accumulated over long periods and that it is dependent on culturally determined norms on values. It is by this logic that Putnam (1993) argued that the cultural endowments for SC in Italy were planted almost a millennium ago. Others have similarly argued for the primacy of culture in determining a nation's ability to achieve economic growth and democracy (Fukuyama, 1995; Harrison, 1992; Landes, 1998).

Some scholars of Central Asia have asserted that the "Asian" characteristics of most of the region's inhabitants have impeded the emergence of Western-style SC, whereas "European" Slavic nationalities possess more favorable cultural traits for democracy.¹¹ We test this argument directly by including in our regressions a dummy variable for self-reported Russians and Ukrainians (whom we code as Slavs). As a secondary test of this hypothesis, we include dummy variables for each Kyrgyz and Uzbek.¹² Hence, in our research context, if the *longue durée* of culture formation matters, we expect to find one or more ethnic variables dominant over the variable for the state in which the respondent lives. If, however, the political context matters more, then the variable for the polity should prevail.

Hypothesis 4: More positive perceptions of the responsiveness of state institutions correlate with higher levels of SC.

Previous empirical studies have shown that higher trust in state institutions correlates with higher levels of SC (Bahry, Kosopalov, Kozyreva, & Wilson, 2005). Consequently, we expect to find higher interpersonal trust and more interaction within horizontal networks when respondents have a positive perception of the government's responsiveness. But rather than ask an abstract question about trust in various state organizations (for the

reasons stated above), we addressed people's actual experience in dealing with the state. Therefore, the survey asked respondents, how often does "local government (village council, neighborhood committee) see to the needs of people in your village/town?" Responses ranged from 1 (*always*) to 5 (*never*).

Hypothesis 5: Assistance from a development organization leads to higher levels of SC.

Finally, we investigate whether the policies of development organizations have an observable effect on the levels of SC. In rural communities, development interventions are usually implemented by nongovernmental organizations (NGOs), which operate under the assumption that development aid can be a major stimulus for local communities to accumulate SC. We measure the influence of community-driven development by asking respondents whether they had "received aid from a nongovernmental organization or international donor organization (for example consultation or education, but not humanitarian help such as medicine or food) in the past five years."¹³

Analysis

To find out whether these hypotheses hold up empirically, we first consider the relationship between trust, norms, and social interaction (networking) to find out whether they are manifestations of the same underlying phenomenon (i.e., SC) or whether they represent distinct concepts. We then consider the factors that affect SC, operationalized as our three proxies. In particular, we test the effect of the institutional setting (as proxied by the state in which the respondent lives) and culture (as reflected by ethnicity). Next, we consider the effect of the responsiveness of the state. Finally, we turn to the role of development interventions, specifically to test whether receiving assistance from an NGO or international organization enhances trust, norms, and social interaction.

To test Hypothesis 1, we use two approaches: first, a simple bivariate (Pearson) correlation and, second, a structural equation model based on the hypothesis that trust, norms, and networking are constituents of a general factor called SC.

The bivariate correlations show that the three components do not all correlate (Table 1). Trust and norms are positively correlated at a significant

Table 1
Bivariate (Pearson) Correlations for Components of Social Capital

| | Trust | Norms |
|------------|--------|---------|
| Norms | .115** | |
| Networking | -.050* | -.079** |

* $p < .05$. ** $p < .01$.

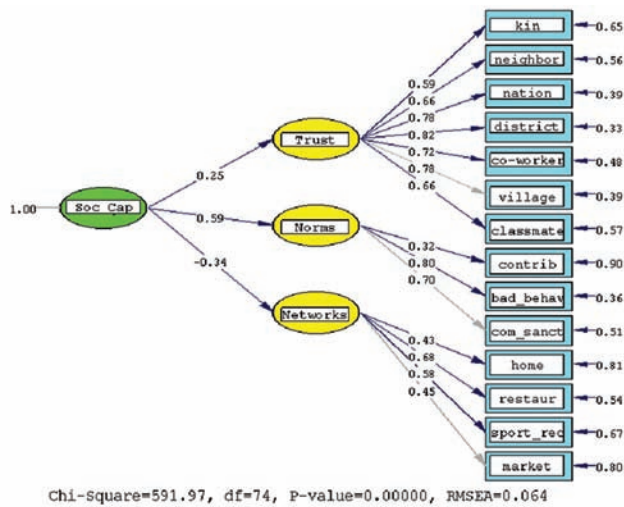
level ($p < .01$) but only at .115. Networking is significantly correlated with trust ($p < .05$) and norms ($p < .01$), but the association is negative. This first operation therefore strongly refutes the idea that trust, norms, and networking are components of a single underlying concept.

For a greater degree of refinement, we also conducted structural equation modeling, which tests whether the indicator variables for trust, norms, and networking load onto a second-order factor, which we can call SC. If they are all influenced by this underlying (so-called latent) variable, they should all load significantly onto it. The structural equation modeling seen in Figure 1 indicates that our three indicator variables do in fact load significantly onto an underlying latent variable. However, we find that whereas norms and trust are positively related to this variable, networking is negatively correlated with it, thus confirming the bivariate correlations.

Both the structural equation model and our correlations therefore disconfirm Hypothesis 1 because networking does not covary positively with either norms or trust. However, norms and trust both load positively onto the same underlying factor and exhibit a degree of positive covariance. As we argue below, the three factors are best explained by different independent variables or are acted on in opposite ways by the same variables. This indicates that trust, norms, and networking are at least partially independent of one another and so cannot be considered aspects of the same phenomenon. SC is therefore a more complex and multidimensional variable than what is usually recognized.

To test Hypotheses 2–5, we use ordinary least squares regression analysis. For each component of SC, we estimate five models. The first includes only personal characteristics: well-being, age, education, gender, religiosity, residence in the capital city, and profession.¹⁴ The second introduces a proxy as an independent variable (with a value of 0 or 1) representing whether the respondent has been the beneficiary of activities by NGOs. In the third model, we add a dummy variable that indicates the state in which

Figure 1
Structural Equation Model



Note: Estimated with LISREL 8.71 (Jöreskog & Sörbom, 1993).

the respondent lives, taking a value of 1 if he or she lives in Kyrgyzstan and 0 if he or she lives in Uzbekistan. The fourth includes dummy variables indicating whether the respondent self-identified as Slavic, Kyrgyz, or Uzbek (to test Hypothesis 2). Last, the fifth regression substitutes the measure of perceived government responsiveness. The results are shown in Tables 2–4.

To be able to make causal claims from our statistical analyses, we need to be sure that the arrow of causality runs in the predicted direction. We can assert with confidence that the control variables, along with the respondent's ethnicity and country of residence, are exogenously determined. Receiving support from NGOs also, more likely than the reverse, influences the extent of people's networks or level of trust. However, the arrow of causation connecting perceptions of government responsiveness and SC is ambiguous, thereby limiting our ability to make causal claims about the relationship.

Table 2
Linear Regression Analysis of Social Interaction (Networking)

| Independent Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|--------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Gender | -0.564 (-5.726) ^{***} | -0.569 (-5.827) ^{***} | -0.529 (-5.705) ^{***} | -0.521 (-5.618) ^{***} | -0.487 (-5.145) ^{***} |
| Age | -0.013 (-3.609) ^{***} | -0.013 (-3.516) ^{***} | -0.014 (-4.005) ^{***} | -0.014 (-4.047) ^{***} | -0.015 (-4.232) ^{***} |
| Education | 0.352 (3.592) ^{***} | 0.356 (3.664) ^{***} | 0.292 (3.163) ^{**} | 0.292 (3.159) ^{**} | 0.296 (3.128) ^{**} |
| Resident of capital city | 0.163 (0.862) | 0.187 (0.996) | 0.068 (0.380) | 0.041 (0.232) | 0.095 (0.514) |
| White-collar worker | 0.331 (2.293) [*] | 0.303 (2.111) [*] | 0.437 (3.206) ^{**} | 0.444 (3.227) ^{***} | 0.433 (3.120) ^{**} |
| Degree of religiosity | 0.062 (2.406) [*] | 0.057 (2.230) [*] | 0.059 (2.440) [*] | 0.054 (2.167) [*] | 0.065 (2.608) ^{**} |
| Well-being (income) | 0.188 (3.689) ^{***} | 0.170 (3.362) ^{***} | 0.082 (1.686) | 0.083 (1.716) | 0.058 (1.171) |
| NGO beneficiary | | 1.052 (5.045) ^{***} | 0.589 (2.934) ^{**} | 0.598 (2.976) ^{**} | 0.658 (3.208) ^{**} |
| Resident of Kyrgyzstan | | | 1.290 (13.620) ^{***} | 1.494 (8.191) ^{***} | 1.287 (12.438) ^{***} |
| Slav | | | | 0.974 (1.808) | |
| Kyrgyz | | | | -0.278 (-1.291) | |
| Uzbek | | | | -0.045 (-0.281) | |
| Responsiveness | | | | | -0.057 (-1.400) |
| Constant | 5.835 | 4.774 | 5.057 | 5.092 | 5.518 |
| Adjusted R ² | .059 ^{***} | .073 ^{***} | .166 ^{***} | .168 ^{***} | .170 ^{***} |
| Sample size | 1,659 | 1,659 | 1,659 | 1,659 | 1,597 |

Note: NGO = nongovernmental organization. The coefficients given are unstandardized coefficients; *t* scores are provided in parentheses.
^{*} *p* < .05. ^{**} *p* < .01. ^{***} *p* < .001.

Table 3
Linear Regression Analysis of Intracommunity Norms

| Independent Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|--------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Gender | 0.010 (0.106) | 0.012 (0.124) | -0.007 (-0.074) | -0.009 (-0.099) | 0.018 (0.192) |
| Age | 0.005 (1.475) | 0.005 (1.442) | 0.006 (1.623) | 0.006 (1.615) | 0.005 (1.384) |
| Education | -0.108 (-1.133) | -0.109 (-1.146) | -0.080 (-0.853) | -0.079 (-0.841) | -0.063 (-0.651) |
| Resident of capital city | -0.896 (-4.881) ^{***} | -0.902 (-4.916) ^{***} | -0.847 (-4.658) ^{***} | -0.841 (-4.608) ^{***} | -0.843 (-4.490) ^{***} |
| White-collar worker | 0.021 (0.154) | 0.029 (0.206) | -0.033 (-0.236) | -0.034 (-0.244) | -0.046 (-0.329) |
| Degree of religiosity | -0.034 (-1.369) | -0.033 (-1.322) | -0.035 (-1.423) | -0.032 (-1.264) | -0.024 (-0.955) |
| Well-being (income) | -0.071 (-1.431) | -0.066 (-1.338) | -0.026 (-0.522) | -0.027 (-0.545) | -0.019 (-0.379) |
| NGO beneficiary | | | -0.063 (-0.310) | -0.066 (-0.325) | -0.004 (-0.020) |
| Resident of Kyrgyzstan | | -0.278 (-1.370) | -0.590 (-6.119) ^{***} | -0.671 (-3.603) ^{***} | -0.654 (-6.222) ^{***} |
| Slav | | | | -0.239 (-0.434) | |
| Kyrgyz | | | | 0.061 (0.276) | |
| Uzbek | | | | -0.040 (-0.246) | |
| Responsiveness | | | | | -0.063 (-1.512) |
| Constant | 9.697 | 9.979 | 9.850 | 9.879 | 9.868 |
| Adjusted R^2 | .017 ^{***} | .018 ^{***} | .039 ^{***} | .038 ^{***} | .038 ^{***} |
| Sample size | 1,667 | 1,667 | 1,667 | 1,667 | 1,605 |

Note: NGO = nongovernmental organization. The coefficients given are unstandardized coefficients; t scores are provided in parentheses.
^{***} $p < .001$.

Table 4
Linear Regression Analysis of Intracommunity Trust

| Independent Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Gender | -0.017 (-0.077) | -0.019 (-0.083) | -0.064 (-0.289) | -0.067 (-0.304) | -0.069 (-0.307) |
| Age | 0.005 (0.617) | 0.005 (0.641) | 0.006 (0.732) | 0.007 (0.792) | 0.007 (0.787) |
| Education | 0.441 (1.921) | 0.445 (1.936) | 0.530 (2.320)* | 0.533 (2.331)* | 0.505 (2.181)* |
| Resident of capital city | -1.888 (-4.164)*** | -1.881 (-4.147)*** | -1.881 (-4.183)*** | -1.831 (-4.084)*** | -1.676 (-3.639)*** |
| White-collar worker | -0.244 (-0.757) | -0.249 (-0.773) | -0.359 (-1.120) | -0.370 (-1.155) | -0.315 (-0.973) |
| Degree of religiosity | 0.145 (2.479)* | 0.144 (2.463)* | 0.139 (2.406)* | 0.133 (2.222)* | 0.129 (2.179)* |
| Well-being (income) | -0.153 (-1.326) | -0.159 (-1.374) | -0.068 (-0.588) | -0.067 (-0.592) | -0.046 (-0.387) |
| NGO beneficiary | | 0.328 (0.684) | 0.791 (1.635) | 0.808 (1.667) | 0.640 (1.301) |
| Resident of Kyrgyzstan | | | -1.207 (-5.240)*** | -1.066 (-2.355)* | -0.982 (-3.927)*** |
| Slav | | | | -1.327 (-1.038) | |
| Kyrgyz | | | | -0.154 (-0.284) | |
| Uzbek | | | | 0.027 (0.071) | |
| Responsiveness | | | | | 0.201 (2.102)* |
| Constant | 16.119 | 15.775 | 15.372 | 15.343 | 14.912 |
| Adjusted R ² | .015*** | .014*** | .032*** | .030*** | .030*** |
| Sample size | 1,483 | 1,483 | 1,483 | 1,483 | 1,436 |

Note: NGO = nongovernmental organization. The coefficients given are unstandardized coefficients; *t* scores are provided in parentheses.

p* < .05. **p* < .001.

The first striking trend that we observe from the regressions is that social interaction is highly dependent on the state in which the respondent lives ($p < .001$, see Table 2).¹⁵ Moving from a strongly authoritarian state (Uzbekistan) to a semidemocratic polity (Kyrgyzstan) substantially increases the likelihood of social interaction within and between communities. This finding strongly supports the first part of Hypothesis 2—that a more liberal regime leads to more networking. This finding appears to be solid, given the substantial increase in the value of the adjusted R^2 in Model 3 (.166) over Model 2 (.073). The lack of significance of the ethnicity variables in Model 5 refutes the hypothesis that the state is significant only because of the ethnic group that predominates on its territory.

However, the second and third parts of Hypothesis 2—that a more liberal regime is conducive to stronger norms and higher levels of trust—is not borne out in the cases surveyed. In fact, we can make a strong statement to the contrary: A more authoritarian regime appears to facilitate stronger norms and higher trust. The dummy variable for residence in less repressive Kyrgyzstan, as opposed to more despotic Uzbekistan, is substantively and statistically significant ($p < .001$) in all three models in which it is included (Table 3). When both the state variable and the ethnicity variables are included (Model 4), the latter are not significant. Similarly, moving from Uzbekistan to Kyrgyzstan reduces the value of our proxy for trust to a significant degree (Table 4), and once again, ethnicity is insignificant. Therefore, in all our tests, the influence of the polity on SC dominated that of ethnicity.

Analyzing the relationship between perceptions of local government responsiveness and SC (Model 5 in Tables 2–4) only partially bears out Hypothesis 4. Perceptions of responsiveness have little impact on networking or norms; the coefficients are small, and in neither case is the variable significant. One relationship stands out, however: The perception of responsiveness predicts higher levels of interpersonal trust ($p < .05$).

The implications of this result are somewhat ambiguous. Most notably, the variable's contradictory effect on the three dependent variables (negative for networking and norms, positive and significant for trust) provides further evidence that the components of SC represent distinct concepts. The relationship between state responsiveness and trust implies (optimistically) the possibility of complementarity, in which social trust improves government performance and vice versa. At the very least, the opposing principle does not find full support—namely, that society functions better when the state is weak or absent.

As for Hypothesis 5—that community-driven development aid increases SC—the results indicate that the recipients of NGO or international donor

aid have a greater tendency to network ($p < .01$; see Table 2, Models 2–5). Exposure to donor aid is not significant in any regression for norms or trust, but it has a large positive substantive effect on trust (.791 and .808 in Models 3 and 4, respectively, in Table 4) and it achieves significance ($p < .10$). Thus, it appears that community-driven development increases some types of SC but not others.

Several of the demographic variables perform well in the regressions. Living in the capital city seems to weaken norms and trust to a highly significant degree ($p < .001$). Higher religious adherence, however, appears to increase networking and trust ($p < .05$ in Tables 2 and 4). The effect of education is positive and significant for networking and trust ($p < .05$ in the case of trust, $p < .01$ for networking). As for occupation, white-collar workers appear to be more prone to networking than are others ($p < .01$). Finally, women and older respondents are, on average, far less prone to networking than are younger and male respondents (Table 2), but gender and age have a negligible effect on norms and trust.

Conclusion

This analysis calls into question the notion that SC is a monolithic phenomenon. By disaggregating SC into trust, norms, and networking, we found that these components do not all point in the same direction. Our bivariate correlation and structural equation model show that norms and trust (on one hand) and networking (on the other) negatively covary. We also found that these components are influenced to different degrees by different variables—specifically, that a less repressive state and greater contact with NGOs lead to a significantly higher level of networking, whereas a more repressive state tends to increase norms and trust. Trust is also significantly and positively related to perceptions of government responsiveness, whereas networks and norms are not. Taken together, these findings suggest that observed levels of SC tend to vary, depending on the context, whereas its component parts may stem from different causes.

Our results are consistent with literature that breaks down SC along a different axis—bonding versus bridging (Narayan & Pritchett, 1999). Bonding SC is a closed form, which operates within the confines of a close-knit community. It consists of regularized but limited interactions within the community, based on the observance of strong unwritten rules and underscored by high levels of trust between close associates. Bridging is a

more open form that involves interactions not only within and but also across groups—the scopes of which are not limited by social norms.

Our analysis goes further, however, in investigating the cause of this divergence. The tendency of individuals to interact in social networks situated within or beyond the community may depend on the character of the political environment that surrounds them. According to our analysis, the dummy variable for the state in which the respondent lives is the most powerful factor explaining the frequency of social interaction. Specifically, the more repressive regime of Uzbekistan appears to have played a role in suppressing the formation of social networks, in comparison with the more liberal Kyrgyzstan, where citizens have been allowed to function with fewer restrictions.

Although our findings do not identify the causal mechanism by which a repressive state influences citizen interaction, it is worth speculating on the causes. As work on authoritarian regimes has shown, strong vertical linkages from the state to society, as characterized by surveillance and the threat of repression, are an effective means of preventing concentrations of power outside the state (Wiktorowicz, 2000). In Uzbekistan, the state maintained Soviet-style control over the economy and the society while actively impeding the growth of civil society. By contrast, in Kyrgyzstan, where the regime loosened its control over society and liberalized the economy, new networks could develop that spanned beyond communities.

At the same time—and posing the greatest challenge to Putnam's definition of SC (1993)—a repressive state appears to have the opposite effect on the levels of norms and trust, increasing rather than decreasing them. One explanation for this result is that although a high police presence in Uzbekistan discourages people from extensively interacting in public places, this lack of interaction cements citizens in their preexisting social circles without exposing them to new people or ideas; so, they maintain trust in those with whom they already frequently interact. Meanwhile, residents of Kyrgyzstan have more opportunities to interact, by virtue of the country's political openness and partial transition to a market economy; yet, impersonal exchanges do not necessarily engender greater trust or stronger social norms—in fact, the opposite may occur when people are forced into greater contact with new ideologies or competing ethnic groups.

On the question of whether SC is a cultural phenomenon with historical roots or whether it can be altered through induced structural change, the results of our analysis clearly point in the latter direction. Ethnicity plays no discernable role in generating any of the three components of SC. The activities of NGOs, however, may not affect the cognitive aspects of social relations (i.e., norms and trust), but they appear to have had a structural

impact, by increasing networking among individuals who have received aid. These findings may have implications for the development community. Contrary to the criticisms of NGO activity in the former Soviet Union (Henderson, 2002; Mendelson & Glenn, 2002), there may be long-term payoffs for the international community to invest in strengthening citizen interaction. It is unclear whether greater networking alone leads to concrete social and political benefits, but broad-based interaction is a prerequisite for a strong civil society and, therefore, a healthy democracy.

The responsiveness of government adds another layer of complexity, having a positive and significant influence on trust but not on norms and interaction. Along similar lines, Bahry et al. (2005) find a relationship between trust in government and trust in other ethnic groups in Russia. They speculate that this is due to the "provision of stable rules of the game" (p. 530). Although this interpretation is reasonable—and although it is true that in Central Asia, as in Russia, government can be responsive without being democratic—it is also possible that the causality runs in reverse: People who trust their fellow citizens may not demand much from the state, if they feel secure. Yet, people who live in fear of their neighbors may demand more intervention from the state to protect their property but will be disappointed when the state is unable or unwilling to provide security.

Given that scholars will continue to investigate the origins and determinants of SC, this analysis suggests several avenues for further research. We believe that there are benefits in disaggregating SC and testing it in diverse contexts, as other quantitative studies have done, even though we have not neared consensus. For example, Paxton (1999) tests Putnam's argument (1993) about the decline of SC in the United States by separating the measurement of trust from that of participation in associations (formal and informal). She finds that although trust in individuals has declined, the level of association has remained the same. Pargal et al. (1999) devise separate measures of participation in civic associations, trust, and norms of reciprocity to explain the community-based provision of trash collection in Bangladesh, noting that membership in associations is not associated with trust or norms. Krishna and Uphoff (1999) similarly disaggregate trust, reciprocity, and solidarity in a study of development outcomes in India, but they find that the three variables correlate well enough to include them in a single index of SC. These studies suggest that the way that concepts are operationalized and the context in which the survey takes place play a large part in determining whether the components of SC are seen to reinforce each other or to function independently. These differing results should lead us to question the utility of SC as an omnibus concept and so direct our efforts toward

finer-grained research into the properties of its component parts. As such, one avenue worth exploring is the causal relationships between them.

Disaggregating the components suggests several ways in which they might be related. One possibility is that they originate from different sources. As we have seen, networking may be affected by exogenous factors, such as NGO interventions and political liberalization. Norms and trust, however, may have cultural or ideational, rather than structural, roots, thereby causing them to develop independently of interaction. Alternatively, they may occupy different positions on the causal path. Rose (1998) criticizes Putnam's definition of SC for "conflating different elements in the causal chain" (p. 151), arguing that networks form as a consequence of trust. Jackman and Miller (1998), echoing Coleman (1988), take the opposing view, arguing that civic organizations that provide a public good generate trust as a by-product. These studies can be combined with insights in other areas, such as urban sociology and social psychology, to identify the mechanisms underlying different causal paths. For example, research on the contact hypothesis has shown that increased interaction between groups can lead to more positive racial attitudes (Sigelman & Welch, 1993). Experiments on group behavior and public goods have found that under certain conditions, people will voluntarily cooperate with groups of strangers to develop self-enforcing norms of reciprocity (Fehr, Fischbacher, & Gächter, 2002; Ostrom, 2000). The study of how the components of SC arise and interact can benefit from incorporating such micro-level research.

A final suggestion for future research has to do with measurement. How we operationalize concepts is critical in determining the quality of the data we get. For example, abstract notions of trust (in people or governments) may tell us little that is meaningful about people's actual behavior and, in turn, the propensity to engage in collective action. Measures of membership in bowling leagues and debating clubs, although easily quantifiable, may be a misleading indicator of actual social practice and so tell us nothing about the society in question. Here, we face a trade-off of internal versus external validity, given that measurements that capture the nuance and complexity of social life and are appropriate in one setting are not certain to travel to other contexts. It may therefore be necessary to specify the settings in which we can test the same indicators of SC (formal or informal organizations; trust across ethnic, religious, or regional divides) and get consistent and generalizable results. Refining our tools of measurement should improve our cumulative knowledge about this elusive concept.

Appendix

Survey Methodology

The survey was administered to 1,000 respondents in Kyrgyzstan and 1,000 in Uzbekistan in July and August 2005. It included all 13 Uzbekistan oblasts and 6 of the 7 Kyrgyzstan oblasts. (Batken Oblast in Kyrgyzstan and several districts in both countries were excluded for logistical reasons.) Interviews were conducted by local trained staff in Russian, Uzbek, and Kyrgyz, according to the preferences of the interviewees. Questionnaires were written in English, translated into local languages, then back-translated to verify accuracy. A pilot survey of 30 respondents was conducted before administering the actual survey. The average response rate was 70% in Uzbekistan and 85% in Kyrgyzstan.

The sampling scheme was designed to capture a representative sample in each country of noninstitutionalized permanent residents older than 18 years. A three-stage stratified clustered sampling procedure was used. First, provinces were proportionally stratified by population, then by their share of urban and rural populations. Within each stratum, primary sampling units were selected according to the population. In cities, such units were neighborhood-based administrative units (*mahallinskiy komitet*) in Uzbekistan and city subdivisions in Kyrgyzstan, with populations ranging from 4,000 to 5,000. In rural areas in both countries, primary sampling units were village councils—formerly, village soviets—which are the lowest level of government. Within primary sampling units, households (including individual apartments in high-rise buildings) were sequentially numbered from household registration books and drawn by a random-number scheme. Individual respondents were chosen via the Kish grid (Kish, 1965). The sample was weighted to correct for discrepancies from the sampled population in sex and age, based on the most recent census (2002 in Uzbekistan; 1998 for Kyrgyzstan) and in the population of the primary sampling units.

Notes

1. See Freedom House, at <http://www.freedomhouse.org/uploads/fiw/FIWAIScores.xls>.
2. A recent exception is Jamal (2007). Ruffin and Waugh (1999) address civil society in Central Asia but in a cursory way.
3. Where scholars have identified social capital in the region, it is usually in the form of sui generis and “Eastern” institutions, such as clan, *mahalla* (neighborhood quarter), and Islamist groups. See Babajanian, Freizer, and Stevens (2005), Freizer (2005), and Collins (2006).
4. The Human Development Index ranks Kyrgyzstan and Uzbekistan at 110th and 113th place, respectively (United Nations Development Programme, 2006).
5. According to the Polity IV scores, which rates the character of a country’s regime on a scale from 10 (fully democratic) to –10 (fully autocratic), Kyrgyzstan was considerably less autocratic than Uzbekistan, with Kyrgyzstan scoring a –3 every year from 1991 to 2003 and

with Uzbekistan being "almost fully autocratic," with a score of -9 for the same period. In 2006, Freedom House rated Kyrgyzstan as "partly free" and Uzbekistan as "not free."

6. Howard (2003, p. 9) uses the same approach in surveying postcommunist citizens.

7. A factor analysis of these variables showed that the three questions were sufficiently congruent to combine into a single variable.

8. Factor analysis showed that these seven indicators could combine into a single variable. The analysis showed that, broadly speaking, there were two types of people: those who trusted their fellow citizens and those who did not. The former group tended to express high levels of trust in all categories of people, whereas the latter group tended to be less trustful.

9. Other scholars of postcommunism have used similar measures to capture informal networks. For example, Gibson's survey (2001) asks respondents in Russia to name three people with whom they "discuss important matters" (p. 56). The World Bank's questionnaire on social capital quantifies, in addition to group membership, the respondent's "sociability," defined as "meetings with people in public places, visits to other people's homes or visits from others into one's own home, and participation in community events such as sports or ceremonies" (Grootaert, Narayan, Jones, & Woolcock, 2004, p. 21).

10. A factor analysis of these variables showed that the four indicators were sufficiently congruent to combine into a single variable. To ensure that this measure is not simply a proxy for the ease of travel, we include in the regressions controls that may affect mobility, such as age, gender, well-being, and residence in the capital.

11. See McMann (2006, pp. 16-17) for a good summary of culture-based arguments as applied to Central Asia.

12. The ethnicity variables do not simply proxy for the state in which the respondent lives. Whereas the population of Uzbekistan comprises more than 80% ethnic Uzbeks (83% in our sample), in Kyrgyzstan only 65% of the population is Kyrgyz, about 15% are Slavic, and 10% to 15% are Uzbek (66%, 19%, and 10% respectively in the sample).

13. We consider this a fair test of the impact of internationally driven aid programs, given that virtually all nongovernmental organizations in Kyrgyzstan and Uzbekistan rely on funding by international donors. See Alymkulova and Seipulnik (2005). Humanitarian help is specifically excluded because direct aid is not thought to increase the levels of social capital, whereas other types of local aid (such as capacity building or infrastructural projects) are commonly associated with community-mobilizing programs.

14. Well-being was determined from the answer to the question "Which of the following best describes the level of well-being of your household?" Respondents were able to select from a list of five options reflecting their purchasing power, ranging from "It is difficult for us to afford even basic goods and food" to "We can buy everything that we need." The variable for religiosity was constructed from respondents' replies to three questions related to how often they pray, go to the mosque, and fast. The values of this proxy range from 3 (not religious at all) to 12 (very religious). Capital city was chosen over a dummy variable for urban/rural residence because, in both Kyrgyzstan and Uzbekistan, residents of the capital typically display greater cultural and social differences from the rest of country than do urbanites versus people in the countryside; therefore, they are more likely to be associated with different levels of social capital. Profession was coded as a dummy for "white-collar worker."

15. We used the square root of the proxy for networking in the regression model to better ensure that normality and homoscedasticity assumptions were satisfied.

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